

NOTES ON THE GENUS THAUMAINA
(Lepidoptera: Lycaenidae)

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The monotypic genus *Thaumaina* was erected in 1908 by G. T. Bethune-Baker for the new species described under the name *uranothauma*. It is a very distinct genus, bearing a pattern relationship to the genus *Uranothauma* Butler (P. Z. S. 1895, p. 631), hence the specific name. It remains one of the peculiar developments of the vast island of New Guinea.

Genus THAUMAINA Bethune-Baker

Bethune-Baker, 1908, P. Z. S. 1908, p. 116. Genotype. *Thaumaina uranothauma* B.-B.

The single species thus far known appears to be restricted to eastern New Guinea, where it is broken up into two races, one of which is described herein as new. It is evidently a highland butterfly, and does not appear to be very common.

The typical form was described (*loc. cit.* and pl. 9, figs. 8, 9) from the Angabunga River, a tributary of the St. Joseph River, which empties on the south coast of eastern New Guinea. On the opposite side of the Owen Stanley Mountains occurs a race of this species. Karl Jordan (1930, Proc. Ent. Soc. London, 5:60, pl. 3, f. 10) has figured a female of this subspecies that agrees well with the allotype described below. This specimen originated on the Edie River, west side of Herzog Mountains, eastern New Guinea. Two males were taken with it, but were not figured.

Thaumaina uranothauma *deliciosa* Wind and Clench,
new subspecies

Thaumaina uranothauma: Jordan, *loc. cit.*

Upperside:

Male. *Fore wing* blackish brown with a bright purplish blue patch in the base, from inner margin up to include the lower half of the cell, and extending two-thirds outwards on inner margin. *Hind wing* with the outer half (nearly two-thirds the area) of the wing brownish black. Costa inside white, darker outwardly. Re-

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maining portion of the wing (save for a narrow inner marginal border) purplish blue. *Fringe* of both wings black and white checked.

Female. *Fore wing* similar to that of the male, but with the blue changed to white and a little more extensive, and with a dark bar extending down over the cell-end from the costa. *Hind wing* with a broad (outer third of the wing) black-brown border. The remaining area is white with pale blue scaling over the inner marginal part. Extreme base black-brown. Veins in the white area lightly scaled with black-brown. *Fringe* as in the male.

Underside:

Male. *Fore wing* with the ground color white. A dark tan scalloped marginal border, behind which is a row of alternately dislocated hollow quadrate spots. This row extends from costa to Cu_2 , while the marginal border proceeds all the way to the inner margin. In the M_3-Cu_1 and Cu_1-Cu_2 interspaces the border and row of spots touch. On the costa is a triangular, black-brown spot, its apex narrowly produced to cover the cell-end. In the base is a long bar, parallel to the costa, and with a connection to it at its outer extremity. *Hind wing* with the dark tan scalloped border as in the fore wing, but with the Cu_1-Cu_2 lunule enclosing a black spot. In the M_1-Cu_1 interspace is a series of connected, jet-black spots, touching the marginal border. In the interspaces from Cu_1 to the inner margin are three more heavy spots, decreasing towards the latter in depth. Base of wing with an irregular black spot. A black, heavy dash, faintly white within, closes the cell. On the costa, almost on the outer angle, is a hollow, nearly circular spot, and one-third from the base is a couplet of similar, though smaller, spots. These markings are all crowded, and almost all appear quite confluent.

Female. Similar to the male, save that the post-discal row of spots on the fore wing is larger and more confluent, and as a consequence, less dislocated.

Length of fore wing: Male and female, 11.5 mm.

Holotype male, WAU, MOROBE DISTRICT, NEW GUINEA, January 30, 1933 (H. Stevens). *Allotype*, female, MT. MISIN, 6400 FEET, MOROBE DISTRICT, NEW GUINEA, May 2, 1932 (H. Stevens).

Paratypes, two males, same locality and date.

Holotype and allotype in the Museum of Comparative Zoölogy. One paratype in collection of each author.

Remarks. This subspecies appears to differ in a number of respects from the description and figure of Bethune-Baker. The black border of the male appears a little heavier on the fore wing, and even more so on the hind wing. On the latter there is no indication of the white spot mentioned and illustrated by him. In the female there are no white spots in the dark border

of the fore wing (two were described, and both show up well in the figure), and the cell is closed by a dark streak running from the costa, absent in the description and figure of the typical subspecies. In the hind wing the pale blue scaling of *deliciosa* is not mentioned by Bethune-Baker, or depicted in his figure. The underside appears to be similar, but perhaps with the spots slightly larger.

ON THREE SPECIES OF AGABUS RECORDED FROM THE
STATE OF MONTANA¹

(Coleoptera, Dytiscidae)

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The inclusion of *Agabus confertus* Le Conte (det. H. C. Fall) in Mank's list of the Coleoptera of Glacier Park (1934, p. 75) was for some years a puzzle to me, as all specimens I had seen were from much nearer the coast. Through the kindness of Miss Mank I examined both Montana specimens on May 3, 1939, and found them to be *Agabus erichsonii* G. & H., a species of similar facies. *A. confertus* may yet be found in Montana for I have seen one taken at Boise, Idaho, June 15, 1941, by Borys Malkin.

In September 1941, Dr. Harlow B. Mills was so kind as to allow me to examine certain of the *Agabus* reported upon by Hatch (1933, p. 10). The *A. seriatus* (Say) of Hatch are all the subspecies *intersectus* (Crotch) of Leech 1942. The series of "*obliteratus* Lec." proved to be composite; two of the specimens from Bozeman are *strigulosus* (Crotch); the others, as well as those from Shields River and Bitter Root Valley are *A. nectris* Leech.

REFERENCES

- Hatch, Melville H., 1933, Records of Coleoptera from Montana, Canad. Ent. 65(1):5-15.
Leech, Hugh B., 1942, New or insufficiently known Nearctic species and subspecies of *Agabus* (Coleoptera, Dytiscidae), Canad. Ent. 74(7):125-136, 1 pl. (= p. 127).
Mank, Edith W., 1934, The Coleoptera of Glacier Park, Montana, Canad. Ent., 66(4):73-81.

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